



Fall 2010

Kansas Nursery Pest Newsletter

Plant Protection and Weed Control
Kansas Department of Agriculture
PO Box 19282, Forbes Field, Bldg. 282
Topeka, Kansas 66619

www.ksda.gov/plant_protection/

Phone: (785) 862-2180

FAX: (785) 862-2182

Quarantined Ornamental Plant Cultivars in Kansas

Darin L. Banks, State Weed Specialist

Every gardener, professional or amateur, loves to get and grow different cultivated varieties of flowers, shrubs and grasses. Exciting, new cultivars are what inspire many plant breeders, but some ornamental cultivars are illegal in Kansas.

The Plant Pest and Commodities Act of Kansas gives the secretary of agriculture authority to quarantine plant pests. A quarantined plant must not be sold, bartered, or moved within the state. Kansas currently has four active, permanent quarantines that impact cultivars that could come into Kansas. These include tamarisk (salt cedar), purple loosestrife, Grecian foxglove, and all federal noxious weeds such as Japanese bloodgrass (*Imperata cylindrica*), giant salvinia (*Salvinia auriculata*, *S. biloba*, *S. herzogii*), and nonnative climbing ferns (*Lygodium flexuosum*, *L. microphyllum*).

Following is a list of cultivars impacted by state-level plant pest quarantines. If you observe any of these cultivars for sale or trade, please contact us at (785) 862-2180. More information on quarantined plants is on our website at www.ksda.gov/plant_protection/content/360.

Tamarisk or Salt Cedar Cultivars

(includes all *Tamarix* species)

Cheyenne Red	Pink Cascade	Plumosa
Rubra	Summer Glow	

Purple Loosestrife Cultivars

(includes *Lythrum salicaria*, *Lythrum virgatum*, and all hybrids derived from these species)

Atropurpureum	Augenweide	Blush
Brightness	Cinereum	Columbia Pink
Dropmore Purple	Feuerkerze	Firecandle
Florarose	Happy	Hirsutum
Lady Sackville	Little Robert	Morden Gleam
Morden Pink	Morden Rose	Prichards Variety
Red Gem	Robert	Robin
Rosa Spitzentraum	Rose	Rose Queen

Rosencaul	Roseum	Rosy Gem
Stichflamme	Swirl	The Beacon
The Bride	The Rocket	Zigeunerblut

Grecian Foxglove Cultivars (*Digitalis lanata*)

Cafe Crème	Genova	Spice Island
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Japanese Bloodgrass Cultivars (*Imperata cylindrica*)

Red Baron	Rubra
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Thousand Cankers Disease of Walnut Quarantine

Jeff Vogel, Program Manager

The Kansas Department of Agriculture enacted an exterior quarantine effective July 20, 2010, regarding thousand cankers disease of walnut.

The quarantine requires individuals or businesses handling regulated articles in Kansas to register with the Kansas Department of Agriculture. Regulated articles include logs, lumber, firewood, bark, mulch, burls, stumps, **live plants**, packing material and all other articles of walnut (genera *Juglans*). Exempt from the quarantine are nuts, nut meat, hulls, and processed lumber that is bark free and from states where thousand cankers disease of walnut is not found.

Individuals or businesses importing regulated articles must enter into a compliance agreement. Imported articles from states known to be infested with thousand cankers disease, or from states that do not conduct an annual survey for the disease, must be inspected and certified free of the disease and the walnut twig beetle before they will be allowed into Kansas. Articles from states known to be infested must be free of bark.

Regulated articles from states that complete annual surveys and are found free of the disease and twig beetle do not need to be inspected before entry into Kansas.

The quarantine and the walnut registry application can be found at www.ksda.gov/plant_protection.

Pine Wilt Management and Control Considerations

Jon Appel, Plant Pathologist

Pine wilt continues infecting pines across central and eastern Kansas, and some cities are minimizing the impact this has on their communities by using management programs.

Following are considerations for the landowner, nurserymen, arborist and municipal forester addressing pine wilt and eradicating or minimizing the impact it has on windbreaks, landscapes and production areas. They are based on published scientific information and observations and professional recommendations from plant specialists with the Kansas Department of Agriculture, Kansas Forest Service and Kansas State University Extension Service.

Susceptible hosts in Kansas by order of susceptibility:

1. Scotch and Mugo
2. Austrian
3. White pine (a few reports in heavily infected areas)
4. Ponderosa (not considered a disease host)

Important aspects of the disease cycle for management:

- The disease moves primarily from tree to tree and location to location by the pine sawyer. The pine sawyer can travel considerable distance during a growing season, but most stay close to where they emerged.
- The pine sawyer transmits the pine wood nematode that causes the disease during maturation feeding (young adulthood to sexual maturity) on pine needles and shoots. Some transmission is also believed to occur during oviposition (laying eggs in the wood of the tree).
- In much of Kansas, pine sawyers emerge in a staggered fashion from late May to early November. Three years of adult pine sawyer trapping and observations of larvae in wood support this hypothesis of a one-generation, staggered-emergence insect.
- Sawyers seek out dead or dying trees to lay their eggs in. This wood is where the insect for the following year overwinters and emerges.
- One tree may contain hundreds of sawyers in the winter.
- There is scientific evidence that pine wood nematodes can infect wounded root systems without the sawyer and through root grafts to nearby trees.



Pine sawyer

- Symptoms include whole trees or bushes dying or dead, to single branch flagging of dead branches seen on Scotch pine.
- Human movement of firewood and nursery trees (latent infection) from infected areas to noninfected areas can move the nematode and sawyer long distances. Slow the spread.



1. Above left. The tree to the left is dying from pine wilt disease and demonstrates the whole tree symptom.
2. Above. Scotch pine branches are flagged (winter).
3. Left. The tree is dead the following spring

Management Recommendations:

- Pine wilt can be diagnosed by testing a dead tree's branches or trunk. In most cases, try to collect wood samples near the trunk and dead branches that have needles attached to them from the current season.



To take a sample pine branch, cut a stub about 5 inches from the trunk. Cut two to three disks (about 1/2-inch thick) from the branch. Combine the disks with disks from two other branches for a good sample.

- It is essential to educate the public, nurseryman and arborists about this pest, both for early detection and proper disposal.
- It is best to monitoring for the disease from September through the following March. Symptoms may develop differently based on environmental conditions. During hot, dry conditions during summer or early fall, trees will die quickly. In cooler, wetter conditions, trees will slowly succumb to the disease over several months.
- Tree removal is the best way to control or eradicate pine wilt. It is best to remove trees diagnosed with pine wilt during **winter months**. Sawyers seek out dead or dying trees to lay their eggs and, if left standing, a dead tree may attract several females to lay their eggs in the wood during summer and fall months. Removing and destroying the tree in the

winter is a good management tool before a new generation of sawyers in the spring. If trees are removed in summer or early fall, only the nematode is removed in the wood. Active sawyers in the area still carry the disease agent and may disperse greater distances if they are disturbed and a brood tree is not nearby. Another advantage of destroying trees in the winter is that it poses less risk of uncontrolled fire for landfills and private burn sites. The wood should not be used for firewood unless it is used immediately and completely.

- Although insecticides will kill the beetle, they often are not practical because the length of time the adult beetle is active and the size of the tree. However, in areas where the disease is known to occur, highly prized trees can be protected by trunk injections.
- If infected trees are left standing, they a disease and inset source for more than a year.
- Stump grinding or root pruning may provide some advantage in cases where pines are near to each other and root transmission is a possibility. Sawyers are not controlled in this fashion.
- Chipping wood and burying wood are two alternatives to burning wood. It is important that branches that are 1 inch in diameter or greater be chipped.
- Chips or wood mulch from an infected pine should not be placed on or near pine trees. Although the chance of infection is low, research suggests that infection is still possible. Use the pine mulch on other tree species.
- Monitor new plantings of larger landscaped trees for pine wilt. Trees dug in infested production fields and moved may show no outward symptom of disease for weeks or months and then will die. Landowners or landscapers may attribute it to transplant shock when pine wilt may be responsible. In noninfested areas, landscaped trees should come from local nursery production and not retail centers handling pines from other areas or states.
- Landfill operators are important partners in community programs. The operator needs to be

informed and brought in as a team member on handling infested plant material.

- In windbreaks and close plantings, trees next to pine wilt trees should be considered for removal because of the possibility of spread in root grafts.
- Landowners need to monitor a site for at least one year after a pine is diagnosed with the disease.

Trapping Programs

The Plant Protection and Weed Control program surveyed for red imported fire ant at 61 live plant dealers in June and August. This survey was to determine the status of the pest in areas identified as high-risk pathways to Kansas. This project was to help minimize the impact this pest could have in Kansas by detecting it early and providing an opportunity for its eradication, if found. Kansas live plant dealers receive plant materials from 269 sources identified within or near the federal fire ant quarantine areas.

There have been six incidents of red imported fire ant being introduced into Kansas. In every instance, they had spread from the initial introduction site. In one case, they even overwintered here. Counties associated with past introductions include Johnson, Douglas, Sedgwick, Harvey and Crawford. The most recent find in summer 2009 was in Montgomery County from plant material a nursery received from Florida.

We appreciate the live plant dealers who let us bait for the red imported fire ant on their property. This type of work is important to protect Kansas. Early detection will improve our chances to eradicate or contain it if it is found.

Area Staff

Northwest Kansas

Bob Buhler

115 N 3rd

Osborne, KS 67473

(785) 345-4246

(785) 207-1507 (M)

bob.buhler@kda.ks.gov

Southwest Kansas

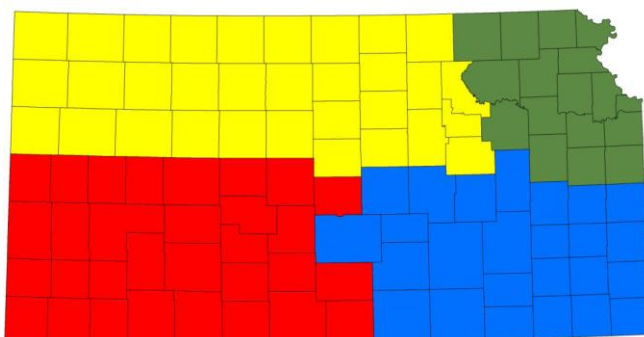
Terry Clarkson

10506 W River Road

Pratt, KS 67124

(785) 256-3849 (M)

terry.clarkson@kda.ks.gov



Southeast Kansas

Vacant

Northeast Kansas

Tom Sanders

PO Box 19282

Forbes Field, Bldg. 282

Topeka, KS 66619

(785) 862-2180

(785) 207-0582 (M)

tom.sanders@kda.ks.gov

South Central Kansas

Cherie Copeland

2728 W 17th Street

Wichita, KS 67203

(316) 943-0438

(785) 207-0580 (M)

cherie.copeland@kda.ks.gov

State Specialists

Jeff Vogel
Program Manager
PO Box 19282
Forbes Field, Bldg. 282
Topeka, KS 66619
(785) 862-2180
(785) 207-0586 (M)
jeff.vogel@kda.ks.gov

Darin Banks
Weeds Specialist
PO Box 19282
Forbes Field, Bldg. 282
Topeka, KS 66619
(785) 862-2180
(785) 207-2118 (M)
darin.banks@kda.ks.gov

Export Specialist
Vacant

Jon Appel
Plant Pathologist
1711 Westbank Way
Manhattan, Ks 66503
(785) 537-3155
(785) 564-0071 (M)
jon.appel@kda.ks.gov

Laurinda Ramonda
CAPS Coordinator
PO Box 19282
Forbes Field, Bldg. 282
Topeka, KS 66619
(785) 862-2180
(785) 580-9194 (M)
laurinda.ramonda@kda.ks.gov

Glenn Salsbury
Entomologist
105 S Dittman
Frontenac, KS 66763
(620) 230-0843
(785) 207-0584 (M)
glenn.salsbury@kda.ks.gov

Sarah Bailey
Administrative Assistant
PO Box 19282
Forbes Field, Bldg. 282
Topeka, KS 66619
(785) 862-2180
sarah.bailey@kda.ks.gov

Kansas Department of Agriculture
Plant Protection and Weed Control
PO Box 19282
Forbes Field-Building 282
Topeka, KS 66619-0282

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